

REMARKS

A final Office Action was mailed on December 15, 2003. Applicants filed a Response on April 14, 2004. An Advisory Action was mailed on June 2, 2004, indicating that the Response raised new issues that would require additional consideration and/or search, and would not be entered. Applicants file the present Preliminary Amendment with a Request for Continued Examination and timely Petition for Extension of Time.

Claims 1 – 3 are pending in the present application. Claims 1 and 3 are amended. No new matter is introduced.

PRIOR ART REFERENCE

The Examiner requests a prior art reference concerning Applicants' admitted prior art (AAPA) as disclosed on page 4 of Applicants' specification. Applicants' note that AAPA relates their operation in Japan of an SDL tool obtained from Telelogic, Inc. of Sweden, from which they are able to produce no documentation in the English language. Applicants will provide additional information about this SDL tool to the best of their ability in response to the Examiner's additional questions.

REJECTION UNDER 35 U.S.C. §§ 103

Claims 1 – 3 are again rejected under 35 U.S.C. § 103(a) as being unpatentable over Applicants' admitted prior art (AAPA) in view of German Patent No. 4,333,004 to Wolfgang et al. Applicants amend claims 1 and 3 to further clarify the nature of their invention, and respectfully traverse this rejection.

As claimed for example in Applicants' claim 1, Applicants claim an information processing method for use with an SDL execution unit described in a specification and description language (SDL), an external environment description unit described in a programming language other than the SDL, an adapter having a pseudo internal signal generator and a queue manager, and an operating system, the method comprising the steps of: a) connecting the SDL execution unit and the external environment description unit to each other through the adapter so that signals containing at least one of messages, events and parameters may be exchanged between the SDL execution unit and the external environment description unit through the adapter; b) executing the external environment description unit as a single task of the operating system; and c) executing the task so that the pseudo internal signal generator (adapter) running on said external environment description unit converts and transfers the signals between the SDL execution unit and the external environment description unit.

In a Response mailed October 2, 2003, Applicants made the following argument:

With reference to Applicants' FIG. 10, AAPA discloses an information processing method for a configuration including an SDL execution unit, an external environment description unit and an operating system. As acknowledged by the Examiner, AAPA fails to disclose Applicants' "adapter that includes a queue manager, connecting the SDL execution unit and external environment description unit through the adapter such that messages, events or parameters are exchanged between them, assigning a single task by the operating system and executing the task so that the pseudo internal generator may transfer the signals between the SDL execution unit and the external environment description unit" (emphasis added). The Examiner suggests that these missing limitations are taught by Wolfgang.

Wolfgang discloses a method for routing a signal from a first software component SC 01 to a second software component SC 02, by means of a message queue MQ and a monitor MO. The message queue MQ belongs to a user program, and both software components employ SDL processes

(see, e.g., page 2, lines 11 – 13 and page 8, lines 11 - 15 of Wolfgang). The monitor MO monitors events pertaining to the queue MQ (such as writing into the queue by first software component SC 01), interrogates the queue upon completion of an event to invoke an oldest signal, and routes the invoked signal to an identified component (such as second software component SC 02).

While Wolfgang provides a means for efficiently routing signals associated with a user program among software components, unlike Applicants' claimed invention, Wolfgang in combination with AAPA fails to disclose or suggest executing an external environment description unit as a single task of the operating system so that the pseudo internal signal generator may convert and transfer signals between the SDL execution unit and the external environment description unit through the adapter. Moreover, neither of Wolfgang and AAPA disclose or otherwise suggest a pseudo internal signal generator for converting the non-SDL information received from the external environmental description unit into SDL signals to be transferred to the SDL execution unit.

In the Office Action of December 15, 2003, the Examiner indicates that he has considered these arguments and found them to be unpersuasive. Specifically, he suggests that AAPA disclosing external environmental description unit 71 of FIG. 10 meets the claim limitation requiring execution as a single task of the operating system, and that AAPA disclosing signal generator 74 of FIG. 10 (equated by the Examiner with the claimed pseudo internal signal generator) converts non-SDL information received from the external environmental description unit 71 into SDL signals to be transferred to the SDL execution units 76-n.

Applicants respectfully disagree. In Applicants' claimed invention, the pseudo internal signal generator in the adapter runs on the external environment description unit to convert and transfer signals directly between the external environment description unit and the SDL execution units without assigning any additional associated tasks to the operating system (see, e.g., page 11, lines 2 – 20 of Applicants' specification).

In sharp contrast, according to AAPA, signal transfer between the external environmental description unit 71 and the SDL execution units 76-n requires that the signals be queued in communications controllers 77-1 to 77-n under control of the operating system 73 (see, e.g., page 5, lines 14 – 33 of Applicants' specification). Thus, as multiple operating system tasks are required to for signal processing according to AAPA (for example, as presented in Applicants' specification at page 5, line 8 through page 6, line 8, including at least one operating system task to activate the external environmental description unit 71 and another operating system task to carry out communications by communications controllers 77-n), AAPA fails to meet Applicants' claim limitations requiring running of the adapter on the external environment description unit, and execution of the external environment description unit as a single operating system task.

The Examiner suggests that the monitor of Wolfgang is analogous to Applicants' claimed adapter. Although, as the Examiner notes in an Advisory Action of June 2, 2004, Wolfgang's monitor runs as a single operating system process, unlike Applicants' claimed adapter, the monitor of Wolfgang is not run on an external environment description unit (for example, by means of a function call from the external environment description unit as described at page 11, lines 3 and 4 of Applicants' specification). In addition, the monitor of Wolfgang does not operate to convert and transfer signals between an SDL execution unit and an external environment description unit described in a programming language other than SDL.

Thus, neither AAPA nor Wolfgang, either alone or in combination, disclose or otherwise suggest Applicants' claimed pseudo internal signal generator running on said

external environment description unit that converts and transfers the signals between the SDL execution unit and the external environment description unit. Accordingly, for at least this reason, Applicants respectfully submit claims 1 and 3 are not made obvious by the combination of Wolfgang and AAPA, and are therefore in condition for allowance. As claim 2 depends from allowable claim 1, Applicants submit that claim 2 stands in condition for allowance for at least this reason.

CONCLUSION

An earnest effort has been made to be fully responsive to the Examiner's objections. In view of the above amendments and remarks, it is believed that claims 1 - 3, consisting of independent claims 1 and 3 and the claims dependent therefrom, are in condition for allowance. Passage of this case to allowance is earnestly solicited. However, if for any reason the Examiner should consider this application not to be in condition for allowance, he is respectfully requested to telephone the undersigned attorney at the number listed below prior to issuing a further Action.

Any fee due with this paper may be charged on Deposit Account 50-1290.

Respectfully submitted,



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